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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/471,637	12/23/1999	YUVAL BACHRACH	42390.P7286	7753

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EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT	PAPER NUMBER
2157	2

DATE MAILED: 10/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/471,637	BACHRACH, YUVAL
	Examiner Christian La Forgia	Art Unit 2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-21 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 23 December 1999 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). ____.
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) Other: ____.

DETAILED ACTION

1. Claims 1 through 21 are presented for examination.

Drawings

2. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

4. The oath or declaration is defective because:

5. It was not executed in accordance with either 37 CFR 1.66 or 1.68.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1, 2, 8, 9, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,385,208 to Findlater et al, (hereinafter Findlater).

8. As per claim 1, Findlater teaches a MAC comprising:

9. at least one PHY-to-MAC port to receive signals indicative of PHY-to-MAC words
(Figure 2; column 1, lines 12-52; column 2, line 18 to column 4, line 14); and,
10. at least one MAC-to-PHY port to transmit signals indicative of MAC-to-PHY words
(Figure 2; column 1, lines 12-52; column 2, line 18 to column 4, line 14);
11. wherein the PHY-to-MAC words include slow mode PHY-to-MAC words, wherein the slow mode PHY-to-MAC words include a transmit cycle field to indicate whether the MAC is to provide data in a next MAC-to-PHY word (Figures 4 & 5; column 1, lines 12-52; column 2, line 18 to column 4, line 14).
12. As per claim 2, Findlater teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words (Figures 3 & 7; column 6, lines 28-67; column 11, lines 6-47).
13. As per claim 8, Findlater teaches a PHY to transmit and receive signals propagated on a medium, and to communicate with a MAC via PHY-to-MAC words and MAC-to-PHY words, the PHY comprising:
14. at least one MAC-to-PHY port to receive signals indicative of MAC-to-PHY (Figure 2; column 1, lines 12-52; column 2, line 18 to column 4, line 14); and,
15. at least one PHY-to-MAC port to transmit signals indicative of PHY-to-MAC words
(Figure 2; column 1, lines 12-52; column 2, line 18 to column 4, line 14);
16. wherein the PHY-to-MAC words include slow mode PHY-to-MAC words, wherein the slow mode PHY-to-MAC words include a transmit cycle field to indicate whether the MAC is

requested by the PHY to provide data for transmission on the medium in a next MAC-to-PHY word (Figures 4 & 5; column 1, lines 12-52; column 2, line 18 to column 4, line 14).

17. As per claim 9, Findlater teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words (Figures 3 & 7; column 6, lines 28-67; column 11, lines 6-47).
18. As per claim 15, Findlater teaches a computer system comprising:
19. a MAC (Figures 1A, 1B, 2, 3, & 7; column 1, lines 17-30); and,
20. a PHY to receive and transmit signals propagated on a medium and connected to the MAC so that the MAC provides MAC-to-PHY words to the PHY and the PHY provides PHY-to-MAC words to the MAC (Figures 1A, 1B, 2, 3, & 7; column 1, lines 17-41);
21. wherein the PHY-to-MAC words and the MAC-to-PHY words are synchronously paired so that the MAC provides one MAC-to-PHY word to the PHY while the PHY provides one PHY-to-MAC word to the MAC (Figures 1A, 1B, 2, 3, & 7; column 6, line 28 to column 7, line 38; column 11, lines 6-47);
22. wherein the PHY-to-MAC words include slow mode PHY-to-MAC words having a transmit cycle field (Figures 1A, 1B, 2, 3, & 7; column 6, line 28 to column 7, line 38; column 11, lines 6-47);
23. wherein if the transmit cycle field of a first slow mode PHY-to-MAC word is set to a first value, the first slow mode PHY-to-MAC word being synchronously paired with a first MAC-to-PHY word, then the MAC is requested by the PHY to provide transmit data in a second MAC-to-PHY word for transmission over the medium, where the second MAC-to-PHY word succeeds

the first MAC-to-PHY word, and if the transmit cycle field of the first slow mode PHY-to-MAC word is set to a second value different from the first value, then no request is made by the PHY to the MAC to provide transmit data (Figures 4 & 5; column 7, line 37 to column 10, line 48).

24. As per claim 16, Findlater teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words (Figures 3 & 7; column 6, lines 28-67; column 11, lines 6-47).

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claims 3 through 7, 10 through 14, and 17 through 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Findlater in view of United States Patent No. 4,525,795 to Rubin.

27. As per claim 3, Findlater does not teach wherein the PHY-to-MAC words and MAC-to-PHY words are each 12 bits wide.

28. Rubin teaches wherein the PHY-to-MAC words and MAC-to-PHY words are each 12 bits wide (Figures 1, 2, & 19; column 11, line 40 to column 14, line 10; column 44, line 49 to column 45, line 65). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the 12 bit words of Rubin with the system of Findlater, because it is the average of the two standards (8 bit words & 16 bit words) used in data

communication, which in turn, allows for more data bits to be transferred than the 8 bit word, and no bits to be left unused with the 16 bit word.

29. Regarding claim 4, Findlater teaches a transmit cycle field in bit position 9 (Figures 2 & 7; column 2, line 18 to column 4, line 14; column 11, lines 7-47). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the transmit cycle field bit in any bit position as long as it was consistent throughout the system.

30. With regards to claim 5, Findlater teaches the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven (Figure 2; column 2, line 18 to column 4, line 14). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the aforementioned bits in any bit position as long as it was consistent throughout the system.

31. As per claim 6, Findlater does not teach wherein the PHY-to-MAC words include equal speed mode PHY-to-MAC words; and PHY-to-MAC words are each 12 bits wide.

32. Rubin teaches wherein the PHY-to-MAC words include equal speed mode PHY-to-MAC words; and PHY-to-MAC words are each 12 bits wide (Figures 1, 2, & 19; column 11, line 40 to column 14, line 10; column 44, line 49 to column 45, line 65). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the 12 bit words of Rubin with the system of Findlater, because it is the average of the two standards (8 bit words

& 16 bit words) used in data communication, which in turn, allows for more data bits to be transferred than the 8 bit word, and no bits to be left unused with the 16 bit word.

33. With regards to claim 7, Findlater teaches the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven (Figure 2; column 2, line 18 to column 4, line 14);

34. the equal speed mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, a receive data valid field in bit position eleven, and a management frames protocol data out field in bit position nine (Figures 2 & 7; column 2, line 18 to column 4, line 14; column 11, lines 7-47). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the aforementioned bits in any bit position as long as it was consistent throughout the system.

35. Claims 10 through 14 are rejected for similar reasons stated above.

36. Claims 17 through 21 are rejected for similar reasons stated above.

Conclusion

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

38. The following patents are cited to further show the state of the art with respect to MAC layer to physical layer interfaces, such as:

United States Patent No. 5,963,543 to Rostoker et al., which is cited to show an error detection and correction for an asynchronous transfer mode network device.

United States Patent No. 6,377,640 to Trans, which is cited to show means for a synchronous network communications system.

United States Patent No. 6,085,248 to Sambamurthy et al., which is cited to show a media access control transmitter and parallel network management system.

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704. The examiner can normally be reached on Monday thru Thursday 7-5.

40. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703) 308-7562. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7240 for regular communications and (703) 746-7239 for After Final communications.

41. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Christian LaForgia
Patent Examiner
Art Unit 2157

clf
October 11, 2002


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